B

DESCRIPTION

The Vortair® EC Series of In-Line Mixed-Flow fans incorporate the latest state-of-the-art, energy saving EC motor technology and are most efficient where conditions vary during the course of the day. They feature fully integrated, infinitely variable speed control which eliminates the need for external VSDs, current overloads and motor phase protection.

Optional matching sensors monitor the ambient conditions and provide real time feedback to the fan. The fan's on-board microprocessor adjusts the speed and therefore modulates the ventilation rate to match the specific requirements of the area. The Vortair® EC fans are a simple "plug and play" system which means installers do not need to have specialised control programming knowledge.

Vortair EC Series feature a heavy duty galvanised steel circular fan casing that can be retrofitted into axial fan installations that may require greater static pressure. They are available in 5 case sizes ranging from 450 to 710mm diameter (280 to 450mm impeller diameters).

Typical Applications

Commercial and industrial supply or exhaust applications such as shopping centres, office buildings, exhibition centres, hotels, health centres, schools and universities.

Features

- Innovative mixed-flow impellers produce powerful airflows without generating high noise levels.
- EC motor features reverse polarity protection, locked rotor protection and soft starting.
- No additional electrical protection such as contactors are required.
- All models supplied standard with 0-10V control input. Diameter sizes from 400mm and above can be pre-configured to suit specific sensors and specific applications.
- A full range of sensors are available including differential pressure, humidity, temperature, air velocity and pollutant.
- Can be run as an independent ventilation source or integrated into most building management systems.
- Heavy duty galvanised steel construction.
- Can be retrofitted into standard 450 to 710mm axial fan installations.
- Mixed-Flow impellers suit applications where medium to high air pressure is required.
- Can be mounted in any position.

Construction

Mixed-Flow impellers are made from high performance injection moulded composite material. Casing made from heavy duty galvanised steel.

Motors

Type - electronic commutated (EC) motor.

Electricity supply - 200-277V single-phase, 50/60Hz

Bearings - sealed-for-life, ball.

See page *O-7* for details on motors.

Integrated EC-Controller providing infinite speed control.

Internal Thermal Protection

Integral thermal overload protection is supplied as standard.

Testing

Air flow tests based on ISO5801: 2007

Noise tests based on ISO13347: Part 3, 2004

Special Note

Diameter sizes 630 and 710mm can be pre-configured to suit specific sensors and specific applications. Please advise Fantech of these parameters at the time of order.

EC motors should be directly connected to their appropriate AC supply. EC motors should not be regularly power cycled.

SUGGESTED SPECIFICATION

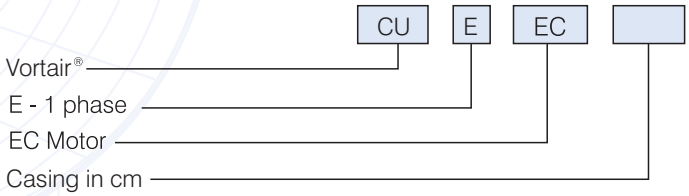
The duct mounted fans shall be of the Mixed-Flow Vortair® EC Series as designed and manufactured by Fantech Pty Ltd. and be of the model numbers shown on the schedule/drawings.

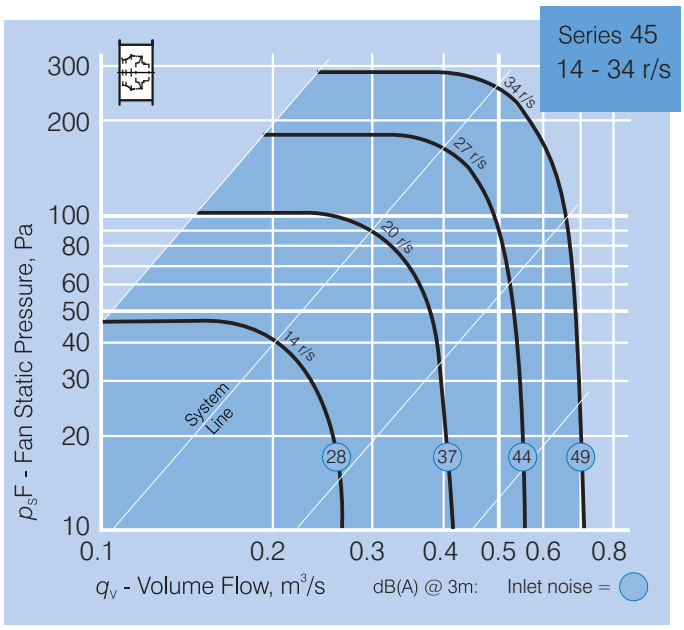
Impellers shall be made from high performance injection moulded composite plastic material. They shall be driven by EC external rotor motors with integrated EC controller and integral thermal overload protection. Diameter sizes 630 and 710mm shall be pre-configured to suit the selected sensors and the required applications.

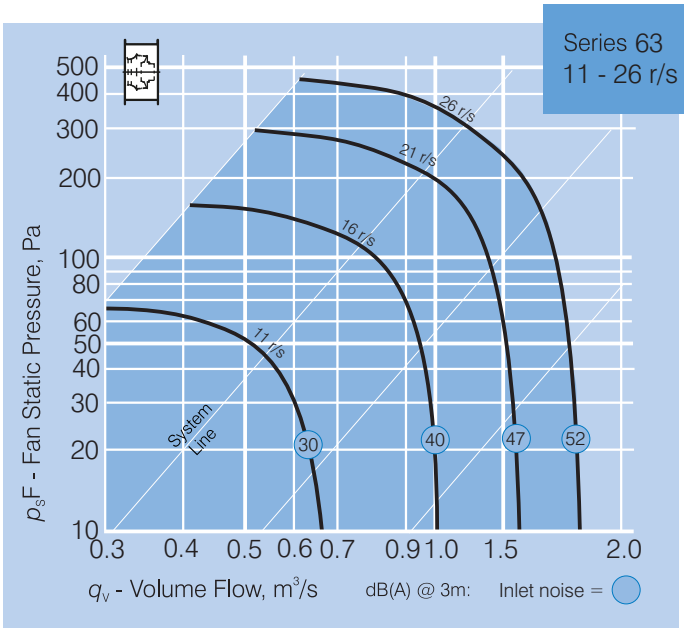
They shall include a heavy duty galvanised steel circular fan casing.

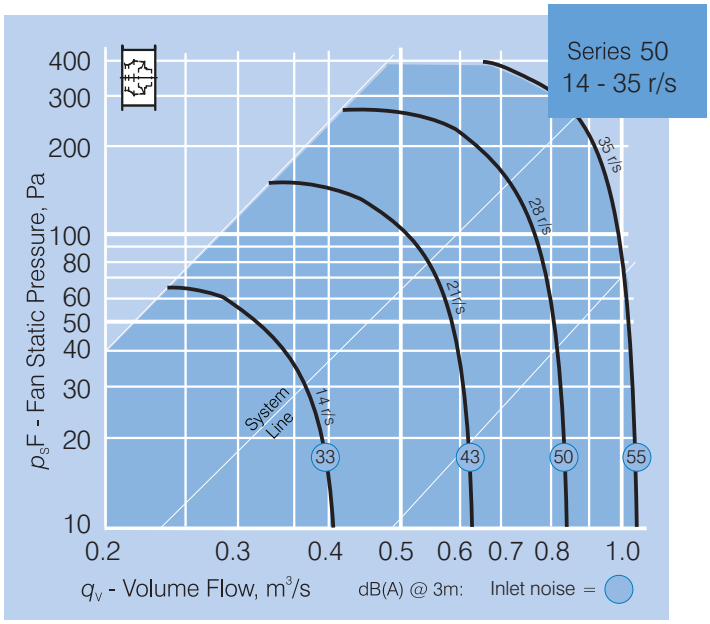
All performance data shall be for a complete assembled unit based on ISO5801: 2007 for air flow and ISO13347: Part 3, 2004 for noise.

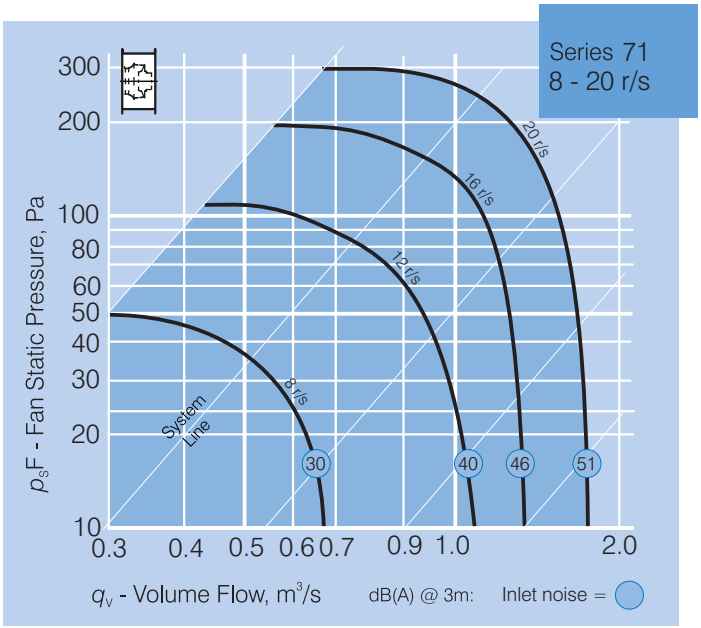
HOW TO ORDER

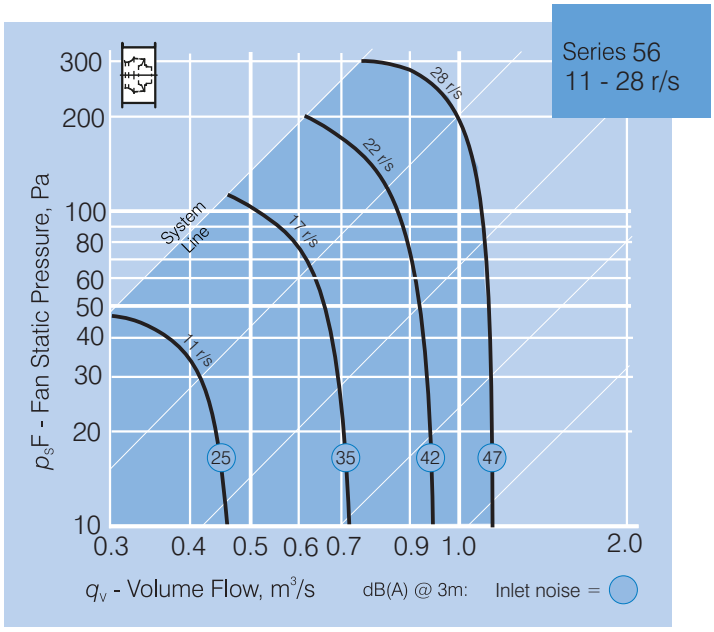




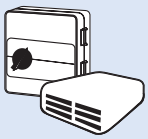
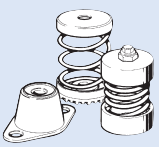
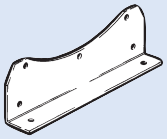




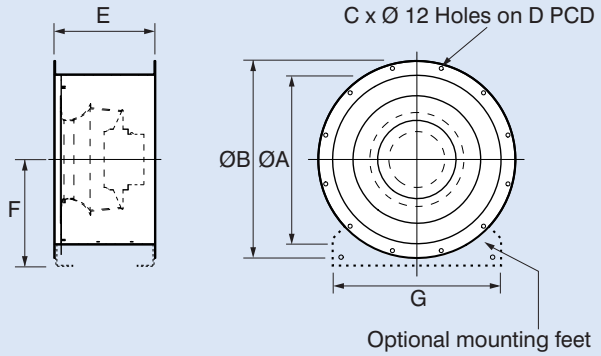




ANCILLARY EQUIPMENT

 DCV-CU - Premium Module on-board control pack *Ref. M-18*	 Controllers & Sensors *Ref. Section M*	 Vibration Isolators Ref. *I-1*
 F - Mounting foot Ref. *J-6*	 Aviator Touch & Aviator Touch PRO Controller *Ref. Aviator Brochure*	

DIMENSIONS



Model CUEEC..	Dimensions, mm AØ	B	C	D	E	F	G	App. wt. kg	App. vol. m^3
45.	450	535	8	500	300	280	450	43	0.14
50.	500	585	12	560	300	315	500	45	0.14
56.	560	645	12	620	300	355	560	51	0.17
63.	630	715	12	690	400	400	630	57	0.26
71.	710	795	16	770	400	450	710	66	0.32

Series	Percentage of full speed (%)	* Max. Fan Speed rev/sec	Max. operating (Deg c)	Air flow @ 0Pa m^3/s	Avg. dB(A) @ 3m	kW	Amps
CUEEC45	100	34	60	0.71	49	0.29	1.26
	80	27		0.57	44	0.15	0.68
	60	20		0.44	37	0.07	0.33
	40	14		0.29	28	0.03	0.19
	20	7		0.15	11	0.01	0.14
CUEEC50	100	35	55	1.30	55	0.55	2.42
	80	28		0.82	50	0.28	1.27
	60	21		0.61	43	0.13	0.60
	40	14		0.41	33	0.04	0.25
	20	7		0.20	17	0.01	0.14
CUEEC56	100	28	55	1.10	47	0.50	2.19
	80	22		0.98	42	0.26	1.15
	60	17		0.74	35	0.11	0.54
	40	11		0.45	25	0.04	0.23
	20	6		0.23	9	0.01	0.13
CUEEC63	100	26	55	1.71	52	0.84	3.68
	80	21		1.35	47	0.43	1.96
	60	16		1.02	40	0.19	0.91
	40	11		0.69	30	0.06	0.53
	20	5		0.35	14	0.02	0.33
CUEEC71	100	20	60	1.80	51	0.65	2.84
	80	16		1.42	46	0.34	1.51
	60	12		1.08	40	0.15	0.69
	40	8		0.70	30	0.06	0.50
	20	4		0.37	13	0.01	0.29

* The fan will maintain the set speed whether run on 50 or 60Hz supply.
Please use Fans by Fantech Selection Program for sound power levels.